Sectt. II.27—50,000—27-10-41.

P.W. (1941) Department.

SERIES.

G.O. No. 2971

Dated 8-12-41

[Despatch Abstract.]

Ports - Mangalore - Reconstruction and re-alignment of north wharf wall and reclaiming land wharves and improvements to the pier 'T' head - Deferred.

PUBLIC WORKS DEPARTMENT

In reply, please quote number, date and short title.

Received ... Registered 492

From (Name) Sri N. Durairaja Ayyar, M.A..B.E.,

(Designation) Superintending Engineer,
Coimbatore Circle, Coimbatore

Post Box. (STATION)

Telegraphic Address

pp1-4 ink - 4648F/41) (Separate file)

To

The Secretary to Government

Public Works Department, Madras.

No 1995 Dated — 1941

Sir,

pp47-49 (K)

*Ref:- G.O. Ms.2194 P.W.D., dated 9-9-1941.

ENCLOSURES.....

SPARE COPIES.....

Sub:- Mangalore North Wharf wall - reconstruction and reclaiming land for additional wharves.

I inspected the work, "Mangalore North Wharf wall-reconstruction and reclaiming land for additional wharves" with the Executive Engineer, Marine Division and the Port Officer, Mangalore on 25-9-1941.

2. A revision of the design is necessary. The Executive Engineer Marine Division proposed that the foundations should be taken deeper to ensure the safety of the work. The sanctioned design provides for concrete foundation which was at a level practically the same as the river bed and he considers it unsafe to have such high foundations in such slushy soil and where river-scours near the wharf may easily reach to depths more than the present depth. He quotes the Port officer as saying that the later letter observed 9' to 14' of water along the line of the wall i.e. corresponding to 6' to 11' below L.W.O.S. and says that with the Kundroli cut completed there appears to be a strong current against this wall and that a lower foundation level will be a necessary precaution. I agree with the views of the Executive Engineer, Marine Division and consider the sanctioned design to be defective. The Executive Engineer, Marine Division has proposed to lower the foundation level from —8.50 to —10.41 from L.S.180 to L.S.900 and from —8.50 to —12.41 in the portion L.S. 0 to L.S. 180. While this lowering of foundation level is obviously essential the exact amount of lowering should be decided only after taking borings at two or 3 places to find out the nature of the sub-soil to about —25.00.

3. The lines on which the sanctioned design should be revised can be settled only after the borings are taken.

4. I agree with the Presidency Port Officer that the work may be abandoned. There is no report attached to the original estimates of the work. I expect that the necessity for the work must have been explained therein. However it is seen from letter

P.T.O.

letter No.1649-40-2. dated 13-8-1940 of the Port Officer Mangalore to the Presidency Port Officer, Madras that the following reasons led to the proposed work.

(a) Increased area within the Customs wall enclosure for the stacking of dutiable cargo (chiefly salt and cashew nuts)

(b) Taking in the pier which is very old and too costly to repair

(c) Providing a site for the building of a passenger waiting and examination shed.

(d) Improving the alignment of the wharf frontage and disposing of extra dredging, as in the past, this area now to be reclaimed has always required constant dredging.

The Port Conservancy Board recommends that the scheme may be abandoned. The Port Officer during my inspection told me that the scheme is not necessary in the interest of the Port. Hence apparently reasons (a) and (c) no longer weigh with them.

Reason (b): The old pier has been removed and perhaps a new pier can be built at a moderate cost.

Reason (d):does not seem to me important enough to warrant the scrapping of the existing wharf wall which was built at a cost of about Rs.30,000/- and which is still in a serviceable condition. The area to be reclaim is about 1½ acres. As against the above there is a large area of about 5 to 6 acres now available opposite to the South wharf wall. Hence I consider that the reasons for the execution of the work no longer hold good and support the recommendations of the Presidency Port Officer, Madras to abandon the work.

Superintending Engineer,
Coimbatore Circle.
1.10.41

S.S.1-10-41

P.W (Hdqrs)

Very urgent

T.H .No.4921 F/41-1 dt 3.11.41

From

The Secretary to Govt, P.W.D.

To

The P.P.o.

Ports - Mangalore ... Extending the South Wharf wall & reclaiming land for wharves. estimate for Rs. 2,27,000. Ref your letter No 2180 ff/38-2 dt 31.10.38 & No. 2413 ff/38-5 dt 7.6.39.

p6 of W E
~~5~~ 5 E

p45 of W E
vide 'X' on p45 W E

Will you kindly submit very urgently the estimate together with your remarks as to when will the work be completed & when will the report for the above work? The report & Estimate for the realignment of the & reconstruction of the North Wharf wall may also be submitted.

Due 1.11.41

P.e. to go

Tm dd 3-11

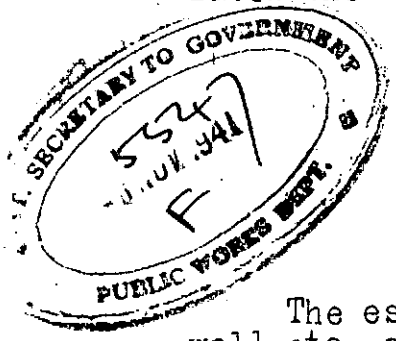
1/11/41

2.11.41

5

REPLY TELEPHONE MESSAGE.

From the Presidency Port Officer, Madras,
To the Secretary to Government, Public Works Department, Madras,
Dated the 5th November 1941.



Ref:- Mangalore - Extending the S
wall and reclaiming land for wharves -
Estimate for Rs.2,27,000/- - Realignment
and reconstruction of the north wharf
wall - Estimate for Rs.62,050/- Telephonic
Message from Government dated 3-11-1941.

pp7-12 wpa

p3 ante

The estimate for Rs.2;27,000/- for extending the South wharf wall etc. and a copy of the estimate for Rs.62,050/- for realignment and reconstruction of north wall are forwarded. The original estimat for the latter work is with Executive Engineer, Marine Division, Madras now in camp. There are no covering reports for either of these estimates.

2 estimates. pp7-18 wpa

pp13-18 wpa

W. L. Scuffle
5/11
Presidency Port Officer

AR

*Port copy in confirmation.

ESTIMATE FORM—Detail Measurements, etc.

Detail of work. (1)	Number. (2)	Measurements in feet. Length. (3)	Breadth. (4)	Depth. (5)	Area or contents. (6)	Total quantity of each description of work. (7)
Improvements to the Port of Mangalore.						
G. Extension of South Wharf wall by 2500 feet and reclaiming land for wharves at Mangalore						
I. Earthwork in hard soil in water necessitating the use of baskets and pans, including three extra lifts.						
Wall north to south	1	2200	12-1½	9-0		
West to East at south end of wall	1	300	12-1½	9-0	344835	
Walls of ramps 3 sides	5	132	12-1½	9-0		
Side walls of drains	4x2	200	9-0	6-0	86400	
For sloping sides of trenches	1	3160	9-0	9-0	257460	
Extras					1305	
					690000	690000 cft
Concrete broken stone in cement mortar proportions 1 cement 3 sand						
Foundations of wall north to south	1	2200	12-1½	2-6		
do. West to east at South end	1	300	12-1½	2-6	95788	
Walls of ramps 3 sides	5	132	12-1½	2-6	—	
Side walls of drains	4x2	200	9-0	2-0	28800	
Floor of drain	4	200	8-0	2-0	12800	
Front wall of ramps	5	358	8-8"	2-6	3864	
					141252	
Deduct for front wall of ramps	5	35-8	12-1½	2-6	5406	
					135846	135900 cft.
Dry stone masonry for retaining walls.						
Wall north to south	1	2200		area 99	217800	
do. West to east	1	300		99	29700	
Walls of ramps 3 sides	5	132		99	65340	
					312840	

8 13

ESTIMATE FORM—Detail Measurements, etc. 1,002—15-3-38.

Detail of work. (1)	Number. (2)	Measurements in feet. Length. (3)	Breadth. (4)	Depth. (5)	Area or contents. (6)	Total quantity of each description of work. (7)
III Dry Stone Masonry for retaining walls continued					312840	
				area		
Front wall of ramps	5	$\frac{37\frac{1}{2}+40}{2}$		36½	7087	
Floor of ramps	5	50-0	40-0	2-0	20000	
Under floor of drains	4	200	8-0	1-0	6400	
					346327	
Deduct for wall in front of ramps	5	$\frac{37\frac{1}{2}+40}{2}$		99	38445	
					307882	307900 Cft.
IV. Coursed rubble in Surki Mortar						
				area		
Side walls of drains	2x4	200		44	70400	70400 Cft.
V. Pointing with cement mortar 1:3						
Face of wall north to south	1	2200		16	35200	
do. west to east	1	300		16	4800	
Wall of ramps 3 sides	5	144		16	11520	
Floor of ramps	5	50	40		10000	
Face of side walls of drains	4x2	200		9	14400	
					75920	75900 Sft.
VI. Cement concrete blocks 1:2:4 laid in cement mortar 1:3.						
Coping of wall north to south	1	2200	2½	0.6	2750	
do. do. west to east.	1	300	2½	0,6	375	
Ramps 3 sides	5	144	2½	0.6	900	
Side walls of drains	2x4	200	2½	0.6	2000	
					6025	Cft. 6025 Cft.
VII. Constructing a ring bund including necessary protections to stand during construction and removal after completion of the work.						
				area		
Ring bund	1	3000		200	600000	600000 Cft
VIII. Pumping water from trenches during construction including all tools and plant etc. complete						
Pumping						L.S.

ESTIMATE FORM—Detail Measurements, etc.

Detail of work.	Number.	Measurements in feet.			Area or contents.	Total quantity of each description of work.
		Length.	Breadth.	Depth.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)
IX. Filling in and reclaiming land for wharves with dredged spoil.						
Reclamation	1	2200	200	10	4400000	4,400,000 cft
X. Petty supervision and contingencies.						L.S.

MARINE FORM No. 6.

ESTIMATE FORM—Abstract.

Quantity. (1)	Description of work. (2)	Rate. (3)	Per (4)	Amount. (5)	Total. (6)
690000 Cft.	Vide item 1 of detailed measure-ments	7-9-0	1000 Cft	5218	
135900 Cft	do. II do.	42-4-0	100Cft	57418	
307900 Cft.	do. III do.	22-0-0		67738	
70400 Cft.	do. IV do.	32-5-0		22748	
75900 Cft.	do. V do.	4-0-0	100Sft	3036	
6025 Cft.	do. VI do.	85-0-0	100Cft.	5338	
600000 Cft.	do. VII do.	2-0-0	100Cft	12000	
L.S.	do. VIII do.	L.S		5000	
4400000 Cft	do. IX do.	8-8-0	1000Cft	37400	
L.S.	do. X do.	Do	Do	5904	
				227000	Rs.227000/-

District— South Kanara District

Port— Mangalore

Head of Charge—Provincial Mangalore Landing and Shipping Fund Act III of 1885.

Name of Work— Improvements to the Port of Mangalore - Extensions of South Wharf wall by 2500 feet and reclaiming land for wharves

Amount of Estimates— Rs.2,27,000/-

To be carried out by— The Port Department

Budget provision—Please see the covering letter to Government

ESTIMATE FORM—Detail Measurements, etc.

Detail of work.	Number. (2)	Measurements in feet. Length. (3)	Breadth. (4)	Depth. (5)	Area or contents. (6)	Total quantity of each description of work.
Improvements to the Port of ~~Mangalore~~ Mangalore.						
A. Realignment and construction of wharf wall, ramps, landing stage, and reclaiming land for additional wharves.						
I. Earthwork excavating in hard clay and sand in water necessitating the use of brackets and pans.						
Foundations wharf wall 1st section	1	85-0	12-1½	4-(		
do. 2nd & 3rd ,,	2	132-0	12-1½	4-(		
do. 4th ,,	1	170-0	12-1½	4-0		
do. 5th ,,	1	260-0	12-1½	4-0	54344	
do. Ramps No.1 3 sides	1	132-6	12-1½	4-0		
do Ramp No.2 & 3 do.	2	104-6	12-1½	4-0		
do Ramp No.1 front wall	2	35-8	8-8	4-0		
do. do. Nos.2 & 3 do	2	27-8	8-8	4-0	3175	
Extras unforseen					2461	
					60,000	60,000 cft
II. Concrete broken stone in cement mortar 1 cement 3 sand stone broken to 1½ gauge						
Foundations wharf wall 1st section	1	85-0	12-1½	2-6		
do. do. 2nd & 3rd	2	132-0	12-1½	2-6		
do. do 4th	1	170-0	12-1½	2-6		
do. do. 5th	1	260-0	12-1½	2-6	33985	
do. Ramp No. 1 for 3 sides	1	132-6	12-1½	2-6		
do. do. Nos. 2 & 3 do.	2	104-6	12-1½	2-6		
do. do. No. 1 front wall	1	35-8	8-8	2-6		
do. do. No.2 & 3 do.	2	27-8	8-8	2-6	1972	
Extras					163	
					36100	36100 cft

ESTIMATE FORM—Detail Measurements, etc. 1,002—15-1-38.

Detail of work. (1)	Number. (2)	Measurements in feet. Length. (3)	Breadth. (4)	Depth. (5)	Area or contents. (6)	Total quantity of each description of work. (7)
III. Dry Stone masonry for retaining walls including bond stones.						
Area of section wall.	1	$\frac{2+3}{2}$		2-9	7.56	
	1	$\frac{4+4\frac{1}{2}}{2}$		3-0	12.75	
	1	$\frac{5\frac{1}{2}+6}{2}$		3-0	17.25	
	1	$\frac{7+7\frac{1}{3}}{2}$		2-0	14.33	
	1	$\frac{8\frac{2}{3}+8\frac{2}{3}}{2}$		2-0	17.00	
	1	$\frac{9\frac{1}{2}+10\frac{1}{2}}{2}$		3-0	29.75	
					98.64 or 99 S.Ft.	
II. Wharf wall 1st section	1	85-0		area 99		
do. 2nd & 3rd	2	132-0		99		
do. 4th	1	170-0		99		
do. 5th	1	260-0		99	110934	
Ramp No.1 3 sides	1	132-6		99		
do. No.2 & 3 do	2	104-6		99		
Ramp No.1 front wall	1	$\frac{37\frac{1}{2}+40}{2}$			2543	
do. 2 & 3 - do.	2	$\frac{29\frac{1}{2}+32}{2}$				
do. No.1 floor	1	50-0	40-0	2-0	4000	
do. No.2&3 do	2	40-0	32-0	2-0	5120	
Extras					157	
					122750	
Deduct for coursed rubble as below:					4950	
					117800	117800 Cft.
IV. Coursed rubble in Surki mortar 1st Class stone proportions 1 lime, 2 Surki and 1½ sand.						
Wharfwall forming landing	1	50-0		area 99	4950	
Under landing steps	1	35 8		9-0	919	
					31	
					5900	5900 Cft.

ESTIMATE FORM—Detail Measurements, etc.

Detail of work.	Number. (2)	Measurements in feet. Length. (3)	Breadth. (4)	Depth. (5)	Area or contents. (6)	Total quantity of each description of work. (7)
V. Pointing (flush) with cement mortar proportions 1 cement. 3 sand						
Quarriwall front face						
do rear do.						
Ramp No.1 3 sides						
do. No.2 & 3 do						
do. No.1 front wall						
do. No.2 & 3 do.						
Floor of Ramp No.1						
do. Nos.2 & 3						

ESTIMATE FORM—Detail Measurements, etc.

Detail of work.	Number. (2)	Measurements in feet. Length. (3)	Breadth. (4)	Depth. (5)	Area or contents. (6)	Total quantity of each description of work. (7)
VIII. Construction of a ring bund in clay with necessary protection during construction including removal after completion of work						
Ring bund	1	900-0	area 270		243000	243000 cft.
IX. Pumping during construction						L.S.
X. Filling and in and reclaiming wharves with dredged spoil.						
Reclamation	1	800-0	$\frac{150-0}{2}$	14-0	812000	812000 cft.
XI. Petty supervision and contingencies						

MARINE FORM No. 6.

ESTIMATE FORM—Abstract.

Quantity. (1)	Description of work. (2)	Rate. (3)	Per (4)	Amount. (5)	Total. (6)
60000 Cft.	Vide item 1 of detail measurements	7-9-0	1000 Cft	454454	
36100 Cft.	do. II do.	12-4-0	100 Cft	15252	
17800 Cft.	do. III do	22-0-0		25916	
5900 Cft.	do. IV do	32-5-0		1808	
24100 Sft	do. V do	4-0-0	100Sft	964	
1647 Cft.	do I do	85-0-0	100Cft	1400	
242 Cft	do II do	2-4-0		540	
243000 Cft	do III do	2-0-0	100Cft	4860	
L.S	do IX do.			1000	
112000 Cft	do X do	8-8-0	1000Cft	6902	
L.S	do XI do			2554	
				62050	Rs.62,050

Grand total of estimate Rs. 62,050/-

Rupees Sixty two thousand and fifty only.

STATION Madras,

Dated October 38.

Port Officer.

[P.T.O.

Assistant Engineer (Marine).

District— South Kanara District

Port— Mangalore

Head of Charge—Provincial Mangalore Landing and Shipping Fund Act III of 1865.

Name of Work—Improvements to the Port Of Mangalore - Realignment and Construction of wharf wall ramps, landing stage and reclaiming land for additional wharves.

Amount of Estimates—Rs.62,050/-

To be carried out by—The Port Department

Budget provision— Please see the covering letter, to Government.

Very urgent.

19

P.W.D

T.M. No. 4921 F/41-2

From

The Secretary to Govt, P.W.D.

To

The P.P.O

Re sanction
4/8/41

pp 13-18 e.f

p.5 e.f

Sir,

I am directed to refer to the correspondence ending with your T.M. dated 5.11.40 regarding the reconstruction of the north wharf wall etc - Estimate for Rs. 62,050 forwarded with p.e. of your T.M. dated 5.11.40 and to state that the estimate amounting to Rs. 62,050 sanctioned in Govt No. 2369 PW (Har) dated 2.10.39 was for the following items of work.

(a) Reconstruction & realignment of north wharf wall & reclaiming land for wharves. &

(b) Improvements to pier 'T' including piling with reinforced concrete piles to form a jetty.

It is presumed that there is a revised estimate for item (a) only amounting to Rs 61,200; but no such estimate for item (b) above. will you kindly say whether

(W) (E)

note para 1 on p1 of (W) (E) & items 1(a) & (b) on p4 nf.

p13-15 & 17 of (K) original note on p5 nf.

Above presumption is correct

If so kindly forward the receipts for the (a) inmate together with the covering ltr ?

7.11.41

Vide Secy's query in the slip below

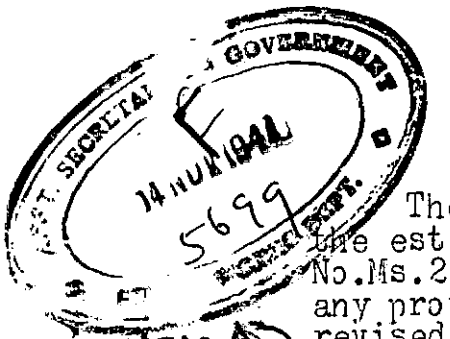
P.C. to go Tm 8/11

Note :- [illegible]
to enclose the P.F. a/c at (2) on 1/4 of [illegible] to Secy's query. The a/c is at Pp 7-12 C/

21

REPLY TELEPHONE MESSAGE.

From the Presidency Port Officer, Madras,
To the Secretary to Government, Public Works Department, Madras,
Dated the 12th November 1941.



X1939

Ports - Mangalore - Realignment and reconstruction of north wharf wall - Estimate for Rs.62,050/- - Telephone Message from Government dated 8-11-'41.

pp 19-20

The Executive Engineer, Marine Division, Madras, reports that the estimate for Rs.62,050/- for the above work sanctioned in G.O. No.Ms.2369 Public Works (Marine) dated 2-10-1941 does not contain any provision for improvements to the pier 'T' head etc. The revised estimate for Rs.61,200/- is only for the work of 'Reconstructing and realigning the north wharf wall and reclaiming area for wharves'. A copy of this estimate with the covering report is forwarded.

pp 23-42 infra

The pier has been dismantled and there is now no pier at the port.

vide (b) on p
19 ante & item 1(b)
Encl:- on p4 infra

One Revised Estimate for Rs.61,200/-
Three plans. (placed below)

pp 23-42 infra

13/11

Presidency Port Officer.

Post copy in confirmation.

Report to accompany the revised estimate for reconstructing and realigning the north wharf wall and reclaiming area for wharves at Mangalore Port.

(E) The original estimate sanctioned in G.O.Ms.No.2369 P.W. (Marine) dated 2-10-1939, provided for a concrete base for the wharf wall at a level 8.5' below the L.W.O.R.S. It was seen that the level was nearly at the bed level of the stream and that the soil being slushy to some depth below this foundation will be unsuitable at that depth and that the ordinary ring bunds round the site slipped into the enclosed area when water level was lowered.

25 MAY 1940 MADRAS

So it is now proposed to build the wall on ~~an~~ rubble base. The site will be dredged by the grab dredger to loosen the soil to a safe depth below the existing bed level and the stones will be dumped at this excavated portions and the wall will be built as shown in the plans accompanying the estimate. The masonry also will be built ~~in~~ with cement concrete mortar.

The filling in rear of the wall will be done by pumping sand into the rear with the help of the suction dredger. Suitable rates have been allowed for these items of works in the estimate.

The contractor doing the work has already collected some materials for the work. These materials will be purchase and used on the work through the contractor who is selected for the new work. Only schedule of rates has been allowed in the estimate for the work.

20.3.40

Executive Engineer,
Marine Division.

AT/18-6.

	Dumping selected boulders 3 to 3½" cube including packing in position with divers.			
	Rough stone boulders S.I.22A			6 13 0
	Add 50% extra for big size boulders			3 6 6
	Conveyance charges by boat 3 miles from Jeppo ~~landing~~	7 14 0 / 4	100 Cft	1 15 6
8 Nos.	Coolies for lifting and dumping stones	0 7 0	each	3 8 0
	Loading rough ~~stones~~ in boats			0 8 0
2 Nos.	Divers	0 14 0	each	1 12 0
L.S.	Add for poles, mango planks boat hire and sundries			1 0 3
				18 15 3 or 18 15 0
100 Cft.	Dumping ordinary boulders S.I.22 A			6 13 0
	Conveyance charges as above	7 14 0 / 4	100 Cft	1 15 6
	Loading in boats			0 8 0
8 Nos.	Coolies for lifting and dumping and packing stones in position	0 7 0	100Cft	3 8 0
1 No.	Diver	0 14 0	each	0 14 0
	Add for poles, mango ~~pins~~ planks, boat hire & sundries			0 14 6

Data sheet to accompany the estimate for reconstruction of north wharf wall at the port of Mangalore.

	Random rubble dry stone masonry set in concrete broken stone (½" gauge metal) in cement mortar 1:3)			
	Random rubble in cement mortar 1:3 as per S.I. 75	36 11 0	100 cft	36 11 0
34 Cft	Deduct difference in cost between cement mortar 1:3 and concrete in cement mortar 1:3	29 10 0		10 1 2
				26 9 10
110 Cft	Conveyance of stone to site of work 3 miles by boat from Jeppo	7 14 0 / 4		2 2 8
	Loading and unloading	1 0 0	each	1 1 7
34 Cft	Conveyance of broken stone 3 miles by boat as above	7 14 0 / 4	100 Cft	0 10 9
	Loading and unloading	0 12 0		0 4 1
13.3/5	Conveyance of sand	4 7 0		0 9 5
4.8/15	Conveyance of cement	2 11 0		0 1 11
	Add extra cost for ½" Gauge metal	4 1 0		1 6 1
				32 14 4
4.8/15 Cft	Deduct difference in cost of cement	0 6 7		1 13 10
				31 0 6 or 31--1--0
	Concrete broken stone in cement mortar 1:4.			
	S.R. for concrete as above 1:2			33 6 0
40 Cft.	Deduct difference in cost of mortar	14 11 0	100Cft	5 14 0
				27 8 0
	Conveyance of broken stone as above	7 14 0 / 4		0 12 7
	Loading and unloading	8 12 0		0 4 10
100 Cft	Conveyance of sand as above	4 7 0		1 12 5
13.1/3 Cft	Conveyance of cement	2 11 0		0 4 4
				30 10 2
	Deduct difference in cost of cement			

	Coursed rubble in cement mortar 1:4 (for 100 Cft).						
	Coursed rubble in cement mortar 1:2.				56	0	0
28 Cft	Deduct difference in cost of mortar 1:2 & 1:4 i.e. 91-3-0 47-0-0	54	3	0	100 Cft 12	6	0
28	Sand conveyance as above	4	7	0	1	3	10
7	Cement conveyance	2	11	0	0	3	0
110 Cft	Stones conveyance	7	14	0	2	2	8
			4				
	Loading andunloading		0	0	1	1	7
					48	5	1
						or	
					48	5	0

Providing a ring bund and maintaining it during construction including removal of piles ~~etc~~., only, after completion of work.

Half split palmyrah piles 6" to 9" dia. at 1 foot centres (2 rows) 200 No.

Longitudinal struts or walings 44 "

Cross struts 16 "

260 "

260 Nos.	Palmyrah piles (can be used twice	2 8 0 / 2			each	325	0	0
	Driving piles in position fixing struts etc. and removing after completion of work	0	8	0	"	130	0	0
2800 Sft.	Bamboo matting inner skin	1	2	0	100 Sft	32	0	0
3.5 units or 3500Cft	Forming a ring bund with stiff clay ~ *below*	17	7	0	1000Cft	52	5	0
	Sundries including nails ropes etc.					10	11	0
	For 100 Rft.					550	0	0
	For 1 Rft 550/100					5	8	0
	Earth work in stiff clay S. I. 14 E					5	14	0
	Loading in boats	0	5	0	100 Cft	3	2	0
	Conveyance of dredged clay from vicinity up to 3 miles by boat	0	8	6	"	5	5	0
	Unloading and dumping within ring bunds	0	5	0	"	3	2	0
						17	7	0

ESTIMATE FORM—Detail Measurements, etc.

Detail of work. (1)	Number. (2)	Measurements in feet. Length. (3)	Breadth. (4)	Depth. (5)	Area or contents. (6)	Total quantity of each description of work. (7)
Reconstructing and aligning the north wharf wall and reclaiming area for wharves at the Port of Mangalore.						
1. Earthwork excavating foundations in silt and sand mixed under water by dredger	1	900	15 35/2	(av) 5-0	112500	
Add for extra at north end and					7500	
					120000	120 units
2(a) Dumping selected rough stone boulders up to channel bed level.						
Foundations of wharf wall	1	900	15 11½/2	4.41	52589	
Add extra depth of 2' at north end	1	180	15-17/2	2-0	5760	
					58349	
Add for variation on levels and sundries					1651	
					60000	600
b) Dumping ordinary boulders including packing voids with smaller stones from channel bed level up to -3.75 level						
Wharf wall		900	11½ 7/2	5.84	46618	
Add extra					382	
					49000	
(c) Concrete broken stone in cement mortar 1:4.						
Foundations for walls of ramp side walls	3x2	17	9-4	2-0	1904	
	3x2	12	8-0	2-0	1152	
	3x2	11-6	7-8	1-6	794	
do. top section including rear walls	3x1	65	5-2	1-0	1008	
					4858	49

ESTIMATE FORM--Detail Measurements, etc. M. F. 4—2,002—12-6-40.

Detail of work. (1)	Number. (2)	Measurements in feet. Length. (3)	Breadth. (4)	Depth. (5)	Area or contents. (6)	Total quantity of each description of work. (7)
3(a). Random rubble masonry set in concrete broken stone (1½" Gauge metal) in cement morter 1:3.			Area of section			
Wharf wall	1	85	39.64	8'	3369	
do.	2	132	"		10465	
					13834	
do.	1	170	"		6739	
do.	1	260	"		10306	
Side walls of ramps 1st section						
1st footing	3x2	14	16.07	8'	1350	
2nd	3x2	15-6	17.13	"	1593	
3rd	3x2	16-6	12.63	"	1250	
4th or top footing	3x2	17-6	7.51	"	789	
2nd section	3x2	10-0	38.25	"	2295	
3rd section	3x2	10-0	27.58	"	1655	
Side and rear wall 4th or top section	3x1	59-4	11.33	"	672	
Floor of ramps	3x1	44-0	40-0	2-3/2	15200	
					53683	
Deduct for coarsed rubble work as below					1982	
					51701	
Add extras					99	
					51800	518 units
Coursed rubble work (1st sort) in cement mortar 1:4.			(area a)			
Wall at steps	1	50	39.64		1982	
Under landing steps	1	35-8	4-9	9-0	919	
					2901	29
Pointing flush with cement morter 1:3.						
Wharf wall front	1	779	8-6		6622	
" ramp inside of wall at sides	3x2	50 7/2		8-6	1453	

ESTIMATE FORM—Detail Measurements, etc.

	Number. (2)	Measurements in feet. Length. (3)	Breadth. (4)	Depth (5)	Area or contents. (6)	Total quantity of each description of work. (7)
B.F.					62	
Floor of ramp	3	52	40		6240	
					14315	144 units
Cement concrete blocks 1:2:4— (stone broken to ¾" gauge) laid in cement mortar 1:3.						
Coping of wharf wall	1	780	2-6	0-6	975	
side and rear wall of ramps	3	140	2-6	0-6	525	
Landing step	2x16	4-9	1-6	0-7½	143	
T o p	1	6-0	7-3	0-6	21	
Bottom	1	4-9	4-6	0-6	26	
					1690	
Deduct R.C. work coping as below.					93	
					1597	
Reinforced concrete work 1:2:4 as per plan.						
As per original estimate					242	
Construction of a ring bund with necessary protection during construction including removal after completion of the work						
Filling in and reclaiming with sandy soil	1	800	156-0x14-0/2	8	73600	
Deduct 50% of mud slush and sand (½ of item 1 in i.e. ½ x 112000)					5600	

Reconstructing & aligning the north Pier of wall at the Port of Mangalore.

Engl. Estimate 620:

Revised "

ESTIMATE FORM.—Comparative Statement of Differences.

Description of work.	Item No.	Original estimate			Revised estimate.			More.	Less.	Explanation of difference.
		Quantity.	Rate.	Amount.	Quantity.	Rate.	Amount.			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
			Rs	Rs		Rs.	Rs.			
For R work excavating foundations in hard clay necessitating the use of baskets & pans	—	60000	7-9-0	654						
Earth work excavating foundations in silt and sandy under water by dredger					120000 C'	13/-	1560	1560		The earth work in foundations under water is proposed to be done by dredger.

P. W. D. V-18— 0,377—20 12-39.

ESTIMATE FORM.—Comparative Statement of Differences.

Description of work.	Item No.	Orignal estimate.			Revised estimate.			More.	Less.	Explanation of difference.
		Quantity.	Rate.	Amount.	Quantity.	Rate.	Amount.			
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
			Rs.	Rs.		Rs.	Rs.			
B/F				4574			1560	1560	4574	
Concrete-broken stone in cement mortar 1:3:6 stone broken to 1½" gauge	2	3600 C'	4240	15252					15252	The original proposal to use Concrete foundations is dropped & hence the omission.
Dumping-selected rough stone boulders 3 to 3½' cube-upto Channel bed-level	(6)				60000 C'	5-150	11363	11363		New foundations with rough stone boulders proposed to be dumped on the proposed bed.
		C/O					12923	12923	15706	

ESTIMATE FORM.—Comparative Statement of Differences.

Description of work. (1)	Item No. (2)	Original estimate Quantity. (3)	Rate. (4)	Amount. (5)	Revised estimate. Quantity. (6)	Rate. (7)	Amount. (8)	More. (9)	Less. (10)	Explanation of difference. (11)
B/F			RS	15706		RS.	12923	12923	15708	
Dumping ordinary boulders including packing voids with smaller stones	2b									New foundations with b proposed to be dumped on the prepared bed.
Concrete broken Stone 1½ gauge in cement mortar 1:9	2c				4500	76.8.0	1299	1299		The foundation of rubble walls in lamps is retained.
Random rubble dry Stone masonry for retaining wall	3	11760	22/	25916					25916	wall is proposed to be built with cement concrete mortar
		C/O		41622			21358	21358	41622	Solid of dry stone mortar with item (3a)

ESTIMATE FORM.—Comparative Statement of Differences.

Description of work.	Item No.	Orignal estimate.			Revised estimate.			More.	Less.	Explanation of difference.
		Quantity.	Rate.	Amount.	Quantity.	Rate.	Amount.			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
B/F				41622			21358	21358	41622	
Random rubble masonry	3a		Rs.	Rs.		Rs.	Rs.			
set in Concrete bed										
Stone 2 gauge in										
Cement mortar 1:3					1500 C.ft	31.10	16090	16090		
Coursed rubble 1st	4									
class in Surki mortar		5500	32.50	1808					1808	Surki mortar is omitted & Cement mortar will be used—vide 4(a)
Coursed rubble 1st	4c									
set in Cement mortar 1:4					2580 C.ft	45.50	1401	1401		
Floor pointing with										
Cement mortar 1:3		14005	4/-	964	14005	4/-	5776	2888		38
C/O				44394			39425	38849	43318	

P. W. D. V-18— 9.377—20 12-38.

ESTIMATE FORM.—Comparative Statement of Differences.

Description of work.	Item No.	Orignal estimate.			Revised estimate.			More.	Less.	Explanation of difference.
		Quantity.	Rate.	Amount.	Quantity.	Rate.	Amount.			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
B.F				44.394			39,425	3834	4383	
			Rs.	Rs.		Rs.	Rs.			
ment concrete blocks	6								133	
:4 laid in cement mortar 1:3		1647 c.ft	85/-	1400	1600 c.ft	85/-	1360		40	
nforced and cement ncrete work.	7	242 c.ft.	2/4/-	570	242 c.ft.	2/4/-	570			
nstructing a ring band ith necessary protection ring construction in ding removal after npletion of work.	8	2,43,000	2/-	4860	950 Rft	5/8/-	5225	365		
mpensation to contractor ring band already t up.	8 (a)				L.S.	L.S.	800/-	800/-		Approximate
umping during construction of wall.	9	L.S	L.S.	1000	L.S	L.S	1000			
			C.O.	52,194			48,350	40,014	43858	

ESTIMATE FORM.—Comparative Statement of Differences.

Description of work.	Item No.	Original estimate			Revised estimate.			More.	Less.	Explanation of difference.
		Quantity.	Rate.	Amount.	Quantity.	Rate	Amount.			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
				52,194 Rs.		Rs.	48350 Rs	40014	43858	
Filling in with sand and reclaiming	10	3,12,000	2/8/-	6902	868,000	10/-	8680/-	1778		
Extending the existing drains	11				2·5	2·5	400	400		
Construction of a temporary shed for cargoes.	12						920	920		
Petty supervision and contingencies	13			2954			2850		104	
				62,050			61200	43112	43962	
					850/-			850/-		

Original estimate Rs 62050/-
Revised estimate Rs 61200/-
Difference (less) 850/-

20/12
Executive Engine

C.F. 32.

43

SECRETARY TO GOVT.

5 DEC 1941

Port Department

From (Name) W.F. Ruffle, Esq.

Designation Presidency Port Officer,

Station Madras

Received Registered 6123

PUBLIC WORKS DEPT.

To

The Secretary to Government,
Public Works Department,
Madras.

Enclosures:

No. 2366 gl/41-4 dated 4th December 1941

Sir,

Port of Mangalore - Improvements - Visit of Mr.H.M.Hood, C.S.I., C.I.E., I.C.S., Second Adviser to the H.E. the Governor of Madras.

I have the honour to forward, for the information of Government, a copy of proceedings of a special meeting of the Port Conservancy Board, Mangalore held on 1-12-1941.

P. 45 below

I have the honour to be,
Sir,
Your most obedient servant,

W. F. Ruffle 4/12

Presidency Port Officer.

AR

Copy of proceedings of a special meeting of the Port Conservancy Board, Mangalore, held at the Port Office Mangalore on Monday the 1st December 1941 at 9.30 a.m.

PRESENT.

1. Sri M.V. Subramanyam, I.C.S., Collector and Chairman.
2. M. Price Esq., Port Officer and Vice Chairman.
3. E.J. Pereira Esq., Customs Collector, Mangalore - Member (Ex-Officio)
4. J.R. Fowler " .. Member
5. W.B. Jackson " .. ,,
6. D. Pinto " .. ,,
7. F.P.S. Albuquerque Esq. .. ,,
8. Sri M. Annappa Nayak .. ,,
9. " G.G. Venkatraya Prabhu .. ,,

H.M. Hood Esquire, C.S.I., C.I.E., I.C.S Adviser to H.E. the Governor of Madras was also present.

Mr. Hood explained the position regarding the alignment of the North wall, the pier, and the South wharf reclamation.

"The Board considers that these works are not at present necessary.

Resolved that suitable schemes for improvement of the Port facilities be prepared and submitted to Government"

Sd. M.V. Subrahmanyan,
Collector & Chairman.

1-12-41.

Ports - works of improvements - P.P.O's proposals for postponement - Gyo.ms.No. 2194 PW dt 9.9.41.

E.no.4648F/41. From the S.E., Dowlaishwaram circle
pp1-3 ef No.10826 dt 19.9.41.
pp5-6 ef From the S.E, Coimbatore. No.1995 M dt 2.10.41.

To AS.

In passing orders on the proposals of the P.P.O for the postponement of certain works of port improvements the S.E Dowlaishwaram circle in Gyo No. 2194 dt 9.9.41 & the S.E, Coimbatore circle were asked to report on the plans & estimates for the Cocanada boat wharf wall & the revision of design for the Mangalore north wharf wall, respectively - vide item 1 under Cocanada & the item under Mangalore on pp47-49 of Gyo.ms.No. 2194 PW dt 9.9.41. In regard to the former the S.E, Dowlaishwaram has recommended a revised proposal pp1-3 ef In regard to the latter the S.E, Coimbatore agree pp5-6 ef with the P.P.O that the work may be abandoned for orders

2 In regard to other items, the Items (ii)(iv)(v) under Nagapatam & item (ii) under Cocanada p48 of (K) P.P.O may be reminded. Draft Submitted. (In regard to Adirampatnam improvements, reply to a further reference is awaited from the P.P.O).

8.10.41.

Issue reminder & put up the reply

25.10.41

X on No.4464F/41-5 25-9-41 (file not put up) vide also p49 (K)

[Issued as on No. 4648 F/41-1 & 9.10.41]

Submitted with reference to AS's orders on p1 ante

13.10.41. 13/10/41

For orders whether the recommendations of the S.E. may be accepted.

13.10.41

S

Put them into two separate files. Consider. The report of the S.E. may sent to the PDO for remarks urgently within five days

Mangalore I will note on this

10.10.41

14

To AS.

With reference to Secy's orders above this has been split up into two files. In regard to Cocanada a draft Endt is submitted separately. (4648 F/41)

In regard to Mangalore the file is resubmitted. (Vide Secy's orders at

(C.no.4921F/41)

work. Rec. recom. may be accepted. The P.P.O may be told to report definite arrangements to which the contractor will agree and also to report works on which the materials can be used (see P.P.O's letter at p.1 of G.O. 2194/41.)

15.

A2. will Secretariat please give us a self contained note on this proposal & its history & circumstances when what has been proposed, put up, examined, & then after a lot of work has been done abandoned I shall like to discuss the matter on the spot

20/5

Put up a summarising note

23/10 4.1

In September 1938 when the Madras Minor Ports ~~Amending~~ Finance Bill for the diversion of the bulk of the balances in the Minor Ports fund to the Provincial Revenues was under discussion there were protests against the measure and the expenditure of the balances on improvement of port facilities at a number of ports was urged. One of the ports was

Mangalore (See Legislative Council Qn. on p.4 and 19 of G.O.(D.))

On 31-10-38 the P.P.O. Commander Osborne-Smith, reported that the following works, among others, were included in the budget of the Mangalore Landing & Shipping Fund for 1938-39:-

1(a). Reconstruction and realignment of north wharf wall and reclaiming land for wharves, and

(b). Improvements to pier 'T' head including piling with reinforced concrete piles to form a jetty Estimate Rs 62,050.
Extending the south wharf wall by 2500 ft and reclaiming land for wharves Estimate Rs 2,27,000.

Plans and estimates were also submitted for these works. In June 1939, in submitting a list of works 'prepared to be financed wholly, or in part, from the 'minor ports fund in the order of urgency relative to 'them being essential or merely desirable', the P.P.O. Commander Osborne-Smith, gave the ~~above~~ (1(a) & (b) ab) works the first place, observed that 'the first work was both essential and urgent as the existing* pier is in a dilapidated condition and must be condemned as it is a source of danger to passengers landing and embarki and asked for a free grant of Rs 40,000 from the Minor ports fund. In this connection, it is observed that there is no record in the file to show that the Port Conservancy Board shared this view of the P.P.O. and approved the estimate.

The P.P.O. proposed to take up the second work piecemeal as necessity arose and funds became available. The estimate for the first work (1a & 1b) was thereupon sanctioned in G.O.No.2369 P.W.(Marine), d/2-10-39 and a free grant of Rs 31,000 was also sanctioned for the

work from the balance in the Minor Ports fund. Tenders for the work were then called for and Mr. J.H. Tarapore's tender* was accepted, signed by Secretary P.W.D. and returned to the P.P.O. in G.O.No.355 P.W. (Marine), d/21-2-1940 The free grant of Rs 31,000/- was transferred for expenditure on the work, from the minor ports fund to the Landing & Shipping fund, at the request of the P.P.O. - Mr. Ruffle - in G.O. No.1623 P.W.(Marine) d/2-8-1940. (In passing, it is submitted that the Marine Dn. was constituted in June 1940 and it was this Dn. that was to carry out the work.) The site was handed over to the contractor in Decr. 1940. He collected materials and started ring bunding but owing to slushy soil, a change of design was considered necessary. In June 1941, the E.E. submitted a revised estimate which was placed before the Port Conservancy Board. It now amounted to Rs 61,200*. The Board passed a Resolution on 25-7-4 to the effect that 'as' the contractor cannot execute the work as per the original estimate, the work be held in abeyance as resolved in minute No.V of meeting held on 26-10-40 and the whole scheme be reinvestigate with a view to abandonment

3. The reasons given by the E.E. for a revised design and estimate are as follows:-- 'The soil 'at the site of the proposed wall was very slushy and 'the ring bund was slipping into the enclosed area when baling was done. There are no sheet piles vailable and hence bunds had to be provided with puddle and clay. The old design provided for concrete foundations which was at a level practically the same as the river bed and it is considered unsafe to have such high foundations in such slushy soil and where river scours near the wharf may easily react to depths more than the present depth. The

revised design provided for deeper foundations, dredging of the site to a safe depth after the floods ceased, and a dry rubble base for the wharf wall. The E.E. also recommended the closing up of the accounts of the contractor, pay him for the materials collected and for the ring bund at some proportionate rate, use the materials on the work as redesigned and call for fresh tenders.

4. The S.E. Coimbatore Circle agrees with the E.E. in considering that the design is defective and that depths of foundations should be decided after borings are taken at 2 or 3 places to find out the nature of the subsoil to about - 25.00 The Port Officer (Mr. Mark Price) is reported to have told the S.E. that the scheme is not necessary in the interests of the port. His (i.e. the Port Officer's) view is apparently that the area within the Customs wall enclosure for the stacking of dutiable cargo (salt and cashew nuts) need not be increased and that no site is necessary for a building for passengers to wait in or for an examination shed. The S.E. considers that a new pier (the old pier has been removed) can be built at a moderate cost, and that the existing wharf wall built at a cost of Rs 30,000 need not be scrapped as it is still in a serviceable condition. He therefore agrees with the Port Conservancy Board and the P.P.O. that the work may be abandoned.

To AS.

With reference to A2's query on p4 ante, it is submitted that item (2) referred to on p4 ante viz. "Extending the South wharf wall & reclaiming land for wharves (estimate - Rs 2,27,000) was proposed to be taken up piecemeal as necessity arose & funds became available. There is no other important work contemplated at the port at present: For orders whether the report & estimate connected with the above work should be obtained from the P.P.O

DWE 31.10.41 — 31.10.41

5 1.11.41

DWE 1.11.41

Draft (Tim) Submitted

DWE 1.11.41 — 1.11.41 — 2.11.41

[Issued as T.M. No. 4921 F/41-1 dt 3.11.41 from the P.P.O. Tim's dt 5.11.41.

16

To AS

The P.P.O has forwarded the estimates for (1) extending the South wharf wall & reclaiming land for wharves - Estimate Rs. 2,27,000/- ~~(2) Roadway from wharf to Estimate Rs 62,000/-~~ There are no covering reports ~~have been sent~~ for these estimates

DWE 6.11.41 — 6.11.41

5 7.11.41

" There is an old estimate for 'extending the South wharf wall a revised estimate for 1(a)-reconstruction & realignment of north wharf wall etc but no revised estimate for 1(b). -improvements to pier T etc

Is the above correct.

(Sd) D.D.W.
7.11.41.

T.M. No. 4921 F/41-2 d 8.11.41 to the P.P.O. pp 19-20 c 7
From the P.P.O. T.m d 12.11.41. 21 c 7.

To A.S.

With reference to Secy's query above it is submitted that there is an old estimate for 'extending the South wharf wall etc' — vide item 2 on p4 ante & pp7-12 c.7 —, that there is a revised estimate for item 1(a) on p4 ante is 'reconstruction & realignment of north wharf wall etc' & that ~~the question of a revised estimate~~ there is not even an old (Separate) estimate for item 1(b) on p4 ante ie 'improvement to pier T etc' - vide P.P.O's T.m on p21 c.7. According to Govt. No. 2369 PW(Mar) d 2.10.39, the sanction to the estimate of Rs. 62,050/- covered both 1(a) & 1(b) of item 1 on p4 ante. But it is now reported that the estimate ~~did~~ does not include item 1(b). It is also reported that the pier has been dismantled & that there is now no

2. The original estimate is at pp 13-18 c.f & the revised estimate at pp 23-42 c.f.

14.11.41

16/11

17.

A2.

17/11

18

The file may lie over until A2 goes to Mangalore.

19.11.41

20.11.41

The file may be noted to A.

21/11

24.

A2 The opinion of the P.C Board with the 3 proposals is that at present none of them is at present required

The E.E. may keep an eye

25/8/41

DRAFT FOR APPROVAL.

	Date.	Initials.
When received for fair copying ..		WM
When copied ..		
When examined..		
When signed ..		9/11
When despatched.		

SUBJECT :— Ports - Mangalore

and re-alignment of north wharf wall and reclaiming land for wharves and improvements to the pier 'T' head - Deferred.

READ AGAIN G.O No. 2369 P.W., dated 2 - 10 - 1939 (D)

" " " " 2194 " " 9 - 9 - 1941 (K)

READ *ALSO* :—

No. 6921 F/41 From the S.E., Coimbatore Circle, No. 1995M, dated 2-10-1941 (H)

" — " P.P.O. " " — " 12-11-1941 P 2

" — " — " 2366 81/41-4 " 6.12.1941

Order ~~Resolution~~ Ms. No. 2971 dated 8. 12. 1941.

(Govt accept the view.

The opinion of the Port Conservancy Board, Mangalore, is that at present none of the schemes sanctioned in G.O. No. 2369 P.W., d. 2-10-39 for reconstruction and re-alignment of north wharf wall and reclaiming land for wharves and improvements to the pier 'T' head at the port of Mangalore, is at present required. The Govt agree with the Board. The E.E., Marine Dn., should watch the existing north wharf wall as the deepening of the water against it may undermine it, the

foundations going only to
-8 or -10 ft. below Low
water level.

2. The P.P.O. should
report definite arrangements
to which the Contractor will agree
Consequence of postponement of
the works, ~~with regard~~ and
also the report the works on which the
materials already collected by
~~him~~, can be used

4.12.41

6.12.41

There is an Rd estimate
for "extending the south
elv" a revised est
for 1(c) receipts &
reducing the but no
revised est for 1(b)
"improvements to pier